



PV CYCLE: Implementing a Voluntary Take-Back and Recycling Scheme for EoL PV modules

**MAKING THE PHOTOVOLTAIC INDUSTRY
'DOUBLE GREEN'**

34th PVSC Conference

11 June 2009, Philadelphia

Virginia Gómez

PV CYCLE

Outline

1. Introduction to PV CYCLE

2. PV CYCLE Members

3. Mission and Objectives

4. PV CYCLE Network

5. Activities Report

6. Future Actions

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1. Introduction to PV CYCLE

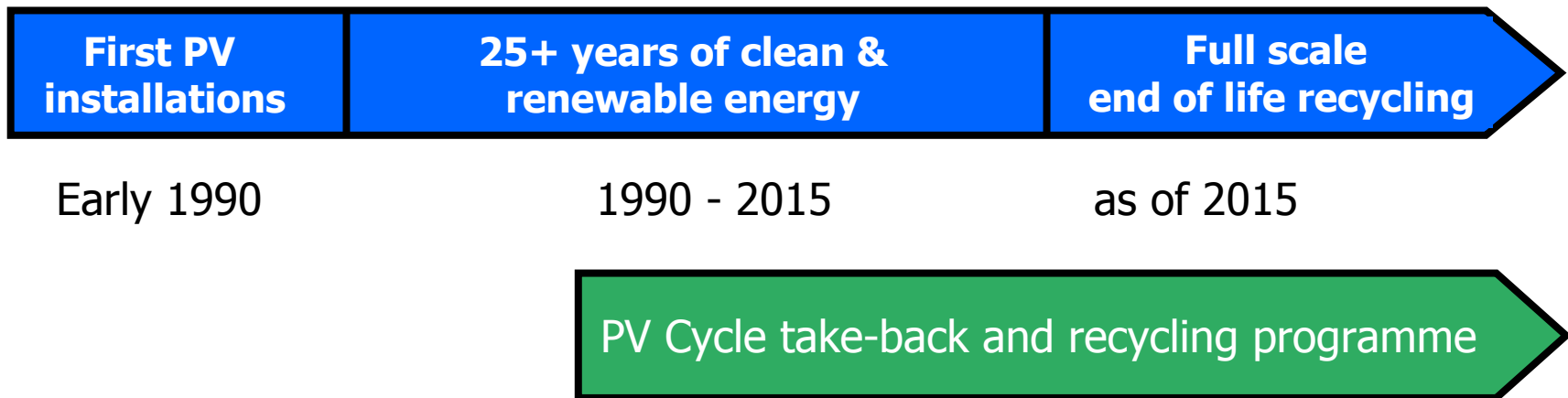
Who We Are:

- Founded in July **2007** by PV manufacturers
- Established and staffed office in Brussels in April **2008**
- Today representing around **80%** of European PV market

1. Introduction to PV CYCLE - Ahead of time

"The industry is strongly committed to act today ahead of the first large scale series of end-of-life modules"

Karsten Wambach, PV CYCLE President



Offering a truly sustainable energy solution today to help prevent climate change tomorrow

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2. PV CYCLE Members

Full members:

- all manufacturers
- all importers
- companies which are reselling under their name
- companies which trademark PV modules manufactured by other supplier

join@pvcycle.org

Associate members:

- all associations
- all research institutes

Very **soon** we welcome as well:

- all wholesalers
- all system integrators
- all electrical installation contractors ...

2. PV CYCLE Members - Benefits

- Be part of the PV industry's **sustainable energy solution**
- **Participate** in PV CYCLE's Working Group
- Help **define** the industry's collection and recycling targets
- **Contribute** to the development of the Voluntary Agreement
- Help **shape** the final PV CYCLE business model
- **Use** the PV CYCLE logo in marketing activities
- **Confirm** your producer responsibility to customers, authorities and stakeholders

2. PV CYCLE Members

- **2007: 6 Founding member - Companies
2 Founding member - Associations**
- **2007: + 13 New Members**
- **2008: + 8 New Members**
- **2009: + 14 New Members**

Current situation:

- **36 Full members**
- **7 Associated members**

2. PV CYCLE Members 2008





2. PV CYCLE Members 2009



New Associate Member 2009



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3. Mission

- **Map** End-of-Life (EoL) PV modules:
 - Discarded by the end user
 - Transport / installation damage
- **Stimulate** their collection and recycling

3. Objectives

- **Implement** the extended producer responsibility
- Take-Back and Recycling of EoL modules in EU + EFTA
 - Becoming operational in **Germany** in **2009**
- **Environmental Agreement** with the European Union

3. Objectives - Voluntary Agreement

Benchmark criteria for the EC interest:

- Compatibility with the Community **Environmental** policy
- **Cost-effectiveness**. Sustainability
- European PV market **representation**
- Ambitious **objectives**. Staggered approach possible
- Involvement of **civil society**
- Independent **monitoring** and **reporting**

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4. PV CYCLE Network – the PV CYCLE Circle

Generating energy



End-of-Life



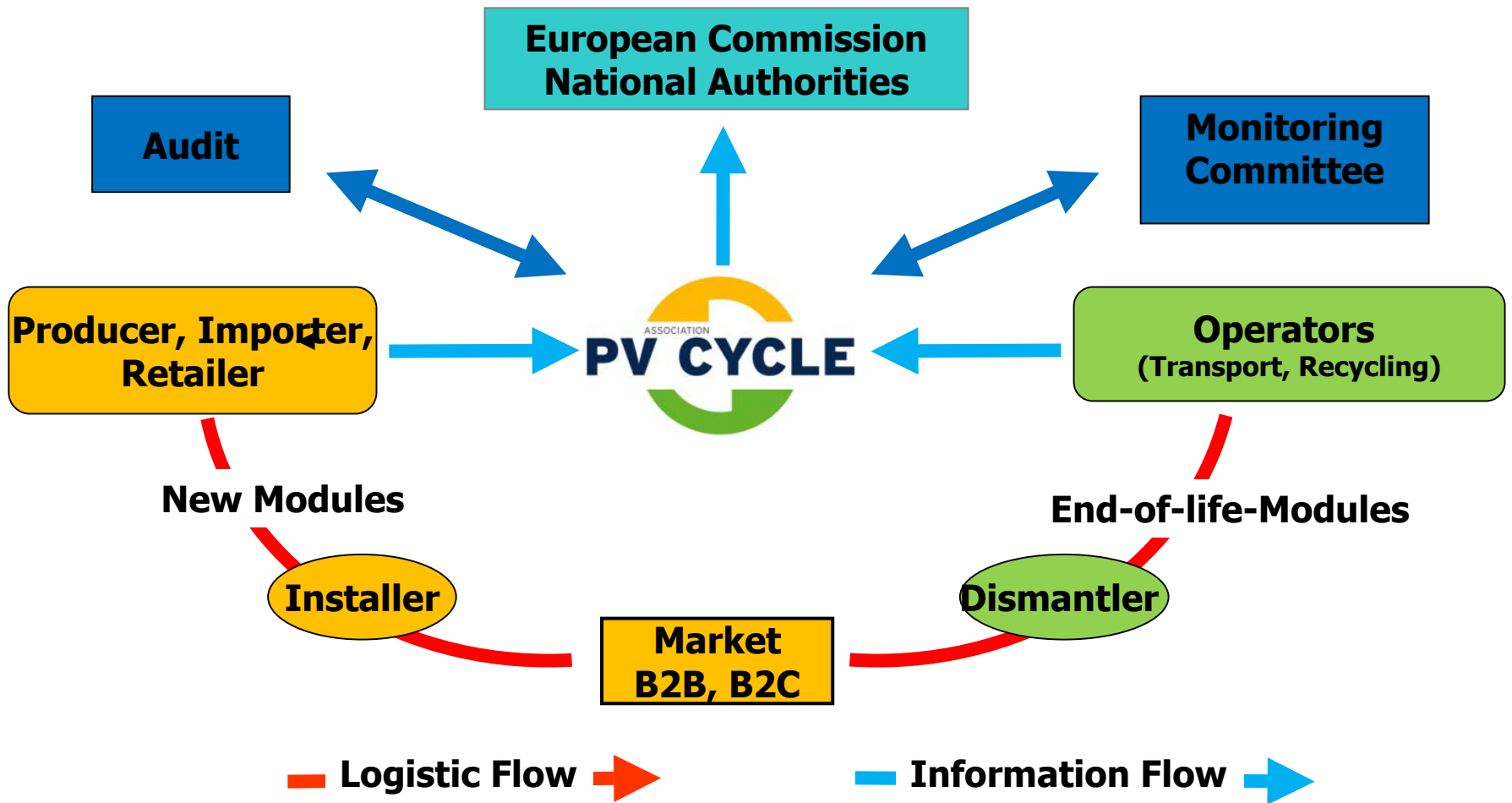
Recycling



Collection



4. PV CYCLE Network



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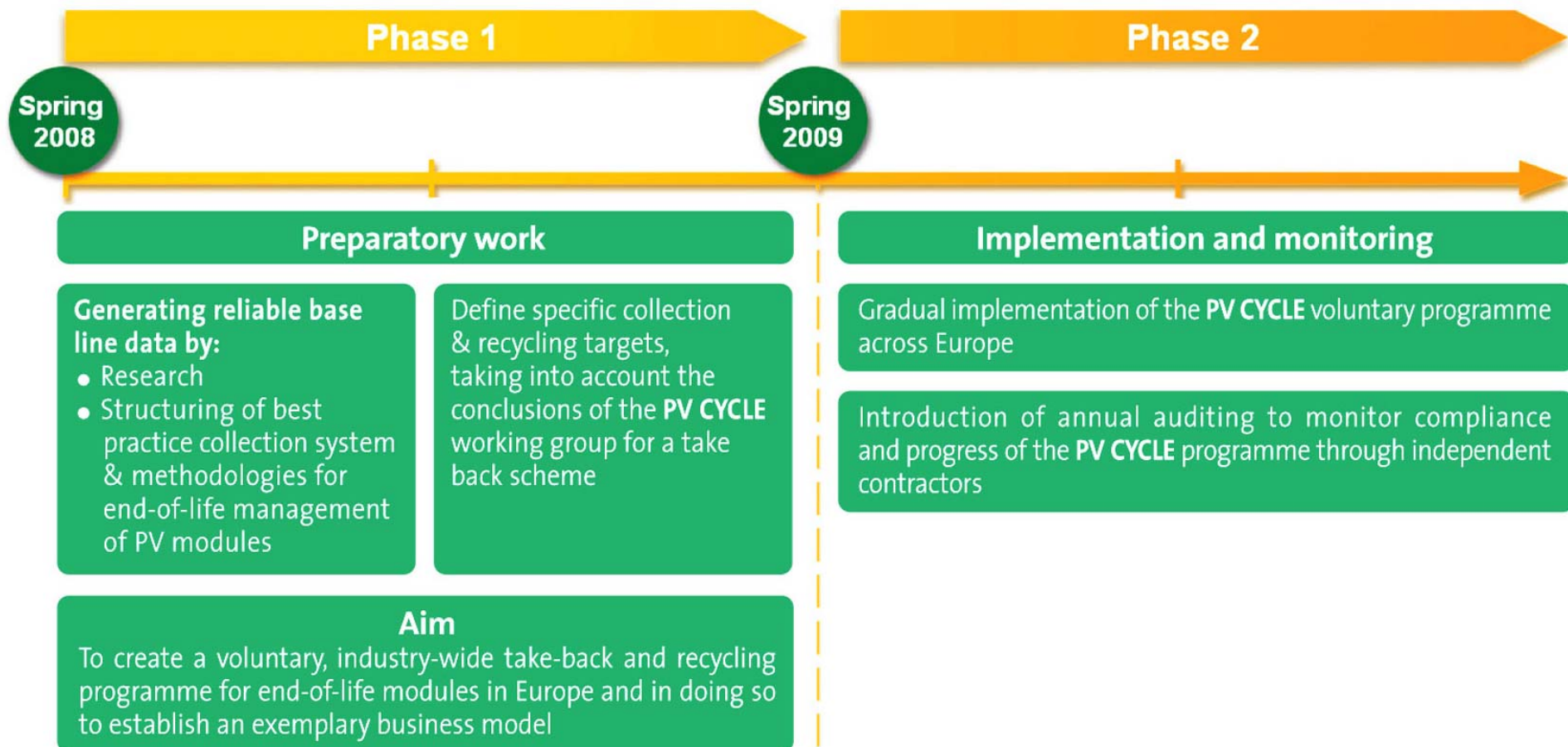
3. Mission and Objectives

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4. Phase 1

2008

Spring 2008:

**PV producers
representing
about 70% of the
EU PV market
join PV Cycle**

Summer 2008:

**PV Cycle
members identify
fundamental
dimensions of
voluntary take-
back and
recycling
programme**

Autumn 2008:

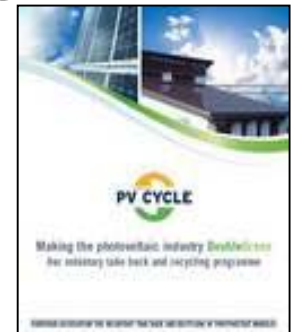
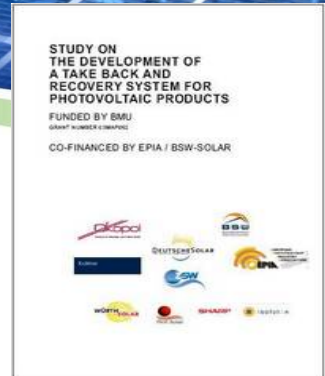
**KPMG to deliver
independent
overview of the
amount and
composition of PV
modules installed
in Europe
throughout 2007**

Winter 2008:

**PV Cycle
members to
define the
specific
objectives and
targets via a
voluntary
agreement**

5. Activities Report - 2008

1. PV CYCLE **Study** on take back and recycling scheme
2. **Website** in July (EN): www.pvcycle.org
New **German** website – www.pvcycle.de - February 2009
3. **Market Research** & RfQ Service Providers for Collection Germany (May 2008)
4. **Brochure** PV CYCLE (EN) – 1 September 2008
5. **Brochure** PV CYCLE (DE) – 15 October 2008
6. **Data Declaration** exercise by members to KPMG





5. Activities Report – 2008 (2)

- 7. Meeting European Commission**
- 8. Meeting BundesMinisterium Umwelt and Umweltbundesamt**
- 9. Executive search for new members**
- 10. First Newsletter - October 2008**
- 11. Start of the Working Group "Take-Back & Recycling Scheme"**

5. Activities Report – 2008 (3)

Working Group:

- Meetings 2008

16 – 17 September

9 – 10 October

5 – 6 November

10 – 11 December



Long form report
PV CYCLE Working Group

- Meetings 2009

20 January

12 February

17 March

30 April

Conclusions

→ PV CYCLE Take-Back &
Recycling Scheme

5. Activities Report – 2008 (4)

Declaration Europe & PV CYCLE

19th December 2008

Declaration signed by the Members of PV CYCLE with the support of **European Commissioner** Mr. S. Dimas and the **President of the European Council**, French Minister of Environment Mr. J-L Borloo.

Promise to conclude an **Environmental Agreement** and open the discussions with the European Union by April 09.

Guiding benchmarks :

- **65%** collection target
- **85%** recycling target
- **free** of charge for the end user

Mr. S. Dimas



Mr. J-L Borloo



5. Activities Report – Current Activities

1. Finalizing PV CYCLE Take-Back & Recycling Scheme

- Logistics – logistics tender in Germany
- Data Declaration
- Recycling
- Costs & Financing

2. Finalizing draft Voluntary Environmental Agreement

3. Dismantling and Recycling the Chevetogne (BE) PV Generator

Build in 1983

Out of order since 2003

2.000 EoL modules



6. Membership fees

Membership Category	Turnover (revenue or sales) in PV Business in Europe in the previous calendar year	Annual fee (2009)
Full Member		
I	>100 Mio €/a	25.000 €
II	10-100 Mio €/a	12.500 €
III	< 10 Mio €	5.000 €
Associate Member *		
(Associations or Research Institutes)		1.000€

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1. Feasibility study on **financial** mechanism
2. Tendering the **recycling** market
3. Encourage the boost of the recycling market

(EPIA - PV CYCLE) **Recycling** workshop in Europe
26 – 27 October
Berlin

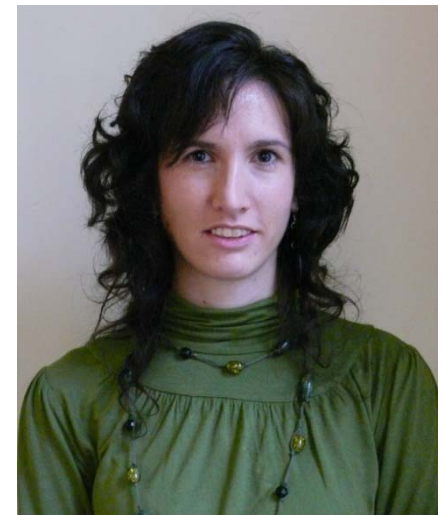
A decorative graphic in the top right corner showing a close-up of blue solar panels with white grid lines, with a bright light source creating a lens flare effect.

Thank you for your attention!



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